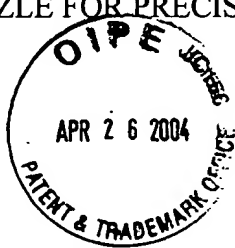


Application No: 09/828,621

Filing Date: April 6, 2001

Applicants: John D. Newbold et al.

For: NOZZLE FOR PRECISION LIQUID DISPENSING AND METHOD OF MAKING



IN THE CLAIMS

{MARKED UP VERSION}

1. A nozzle for delivering a measured quantity of viscous liquid comprising:

a) an opening defined by a perimeter and a cylindrically-shaped barrel wall extending from said perimeter downward to a break point defined by a circle spaced-apart from said opening;

b) means for connecting said barrel wall of said nozzle to a reservoir from which a viscous liquid is transferable to said nozzle;

c) a cone-shaped wall extending downward from said circular break point and then inward there from to a circular exit opening; and,

d) a straight, small-diameter exit tube, of uniform diameter, extending from said circular exit opening to a circular exit aperture for dispensing the liquid from said nozzle;

e) wherein there is a controlled ratio of the internal diameter of said exit tube and the wall thickness of said exit tube.

2. (CANCEL)

3. (CANCEL)

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4. The nozzle for delivering a measured quantity of viscous liquid of Claim 1 wherein the ratio of the internal diameter of said exit tube to the wall thickness of said exit tube exceeds 7.5.
5. The nozzle for delivering a measured quantity of viscous liquid of Claim 1 wherein said opening is circular and said horizontal perimeter is about 25 mm in diameter.
6. *(CANCEL)*
7. *(AMMEND)* The nozzle for delivering a measured quantity of viscous liquid of (Claim 6) Claim 1 wherein said cone-shaped wall extending downward from said circular break point and then inward there from to a circular exit opening has a wall convergence between about 5° and about 20°.
8. *(AMMEND)* The nozzle for delivering a measured quantity of viscous liquid of (Claim 6) Claim 1 wherein said cone-shaped wall extending downward from said circular break point and then inward there from to a circular exit opening has a wall convergence of about 10°.
9. *(CANCEL)*
10. *(CANCEL)*
11. *(AMMEND)* The nozzle for delivering a measured quantity of viscous liquid of (Claim 6) Claim 1 wherein said flare wall extends inward from said perimeter about (5 num.) 5 mm.
12. *(CANCEL)*
13. *(AMMEND)*

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13. (*AMMEND*) The nozzle for delivering a measured quantity of viscous liquid of (Claim 6)  
Claim 1 wherein said cylindrically-shaped barrel wall extends downward from said flare wall at an angle of about 2° with the vertical.
14. (*CANCEL*)
15. (*AMMEND*) The nozzle for delivering a measured quantity of viscous liquid of (Claim 6)  
Claim 1 wherein said cone-shaped wall extends downward from said circular break point at an angle of about 15° with the vertical.
16. (*CANCEL*)
17. (*CANCEL*)
18. (*CANCEL*)
19. (*CANCEL*)
20. (*CANCELLED FOR AMMENDMENT A*)